

BICORNIFERA LINDENBERG, 1965 EMEND. KEIJ,
1969 (MICROPROBLEMATICA) FROM THE TYPE
BYRAM MARL (OLIGOCENE), MISSISSIPPI

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Abstract.—The occurrence of *Bicornifera* Lindenberg emend. Keij (1969) is documented for the first time from the Oligocene Byram Marl of Mississippi. Observations are made on the morphologic variation of the taxon.

Lindenberg (1965) established the genus *Bicornifera* for problematic microfossils of unknown affinity obtained from lower to middle Oligocene strata in the North Tyrol, Austria. He designated *Bicornifera alpina* as type-species for the genus and also described *B. longa* in this work. Lindenberg (1965:18) noted that the genus also occurred in coeval marls in northern Slovenia and Turkey.

Lindenberg's (1965) generic concept of this problematic taxon was emended by Keij in 1969. This emendation was based on specimens of *B. lindenbergi* Keij (1969) obtained from the upper Oligocene of Escorneb eou, S. W. France. In addition, Keij (1969:245) briefly described and illustrated a single, poorly preserved specimen retrieved from an upper Oligocene Alabama sample, which he left in open nomenclature.

The present note documents additional occurrences of this taxon in the New World and provides further information on its geographic extent.

We were prompted to select the Byram Marl for examination following a request from S. J. St. Romain (University of New Orleans, pers. comm. 9/19/79) for information concerning some problematica he had obtained from the Byram Formation. These forms proved to be *Bicornifera*, and represented the first recorded, if not documented, occurrence of this taxon in Mississippi.

Our specimens are virtually identical to the form Keij (1969:Fig. 7) illustrated as *Bicornifera* n. sp. The new specimens exhibit a range in length of 0.39 mm–0.47 mm, in L_2 (Lange der beiden Hauptkammern of Lindenberg, 1965) of 0.25 mm–0.34 mm, in maximum width of 0.14 mm–0.15 mm, and in height of 0.13 mm–0.16 mm. The dimensions of Keij's specimen (length 0.42 mm, width 0.17 mm, height 0.17 mm) fall within the ranges quoted above for our specimens. In addition, we have observed considerable variation in the degree of cameral inflation, in the development of flange-like lips around the main apertures and in the development of the distal prolongation. A detailed article, in preparation, will document the morphologic

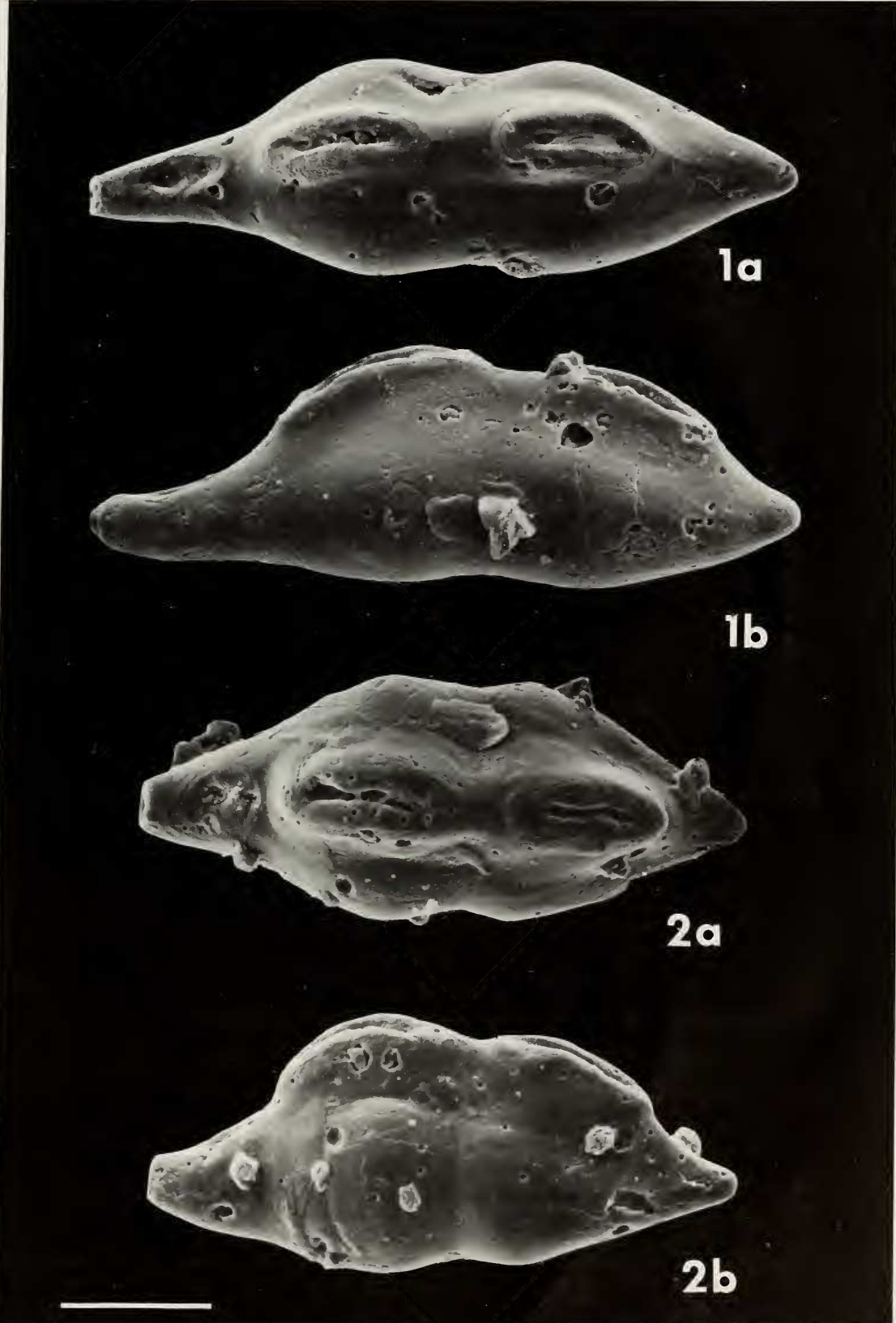


Fig. 1. *Bicornifera* sp. Keij, 1969: 1a, 1b, Dorsal and side views of elongate specimens; 2a, 2b, Dorsal and side views of specimen with well developed flange-like lips around main apertures. Bar = 100 μ m.

variation and ultrastructure of these specimens. SEM study of our specimens suggests that the proximal opening illustrated by Keij (1969:Fig. 7b) is probably the result of test fragmentation. We have evidence from complete specimens to indicate that the proximal part of the test is not perforated in any manner. Keij (1969) commented that his *Bicornifera* n. sp. somewhat resembled *B. longa* Lindenberg, the only difference being that the Alabama specimen was more thick-set. We question this statement because *B. longa* exhibits well developed proximal and distal prolongations that have secondary apertures on their dorsal surfaces. *Bicornifera* n. sp. of Keij (1969) does not demonstrate these features and neither do ours. We have elected at present to follow the philosophy of Keij (1969) and retain our specimens of *Bicornifera* in open nomenclature.

Acknowledgments

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